

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000781**Date Inspected:** 05-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sha Zhi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Caltrans Mock-Up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Ken Jobes randomly observed the in-process and completion Shielded Metal Arc Welding (SMAW) on two weld joints on the 89M Mock-Up Diaphragm Plate Sub-Assembly. The welds were identified as MUSB-SA13 B/C-19 (Welder No. 066243), and MUSB-SA13 B/C-20 (Welder No. 066179). The QA Inspector observed that ZPMC American Welding Society (AWS) Certified Welding Inspector (CWI), Sha Zhi (AWS CWI No. 07081551) was present during welding. Bureau Veritas inspectors, Huang Li and Xu Liang Zhang were also present. Welding Procedure Specification (WPS) No. B-T-3312-TC-P5, Rev. 0 for Shielded Metal Arc Welding (SMAW) was being used for both welds. The procedure references the following:

Electrode	Diameter (mm)	Amperage	Voltage	Travel Speed (mm/Min.)
E9018M-H4R	4.0	130 – 210	19 – 27	51 – 181
E9018M-H4R	4.8	180 – 300	20 – 28	74 – 269

The QA Inspector observed that the parameters above were within the given WPS ranges. The specified preheat and interpass temperatures were observed to be within 180° Celsius minimum and 230 ° C maximum as specified on the WPS for thicknesses greater than 60 mm.

The QA Inspector observed that the welders were Li Zhengxu (No. 66179) and He Shibing (No. 66243). Using the APMC Master List of Welders/Welding Operators/Tack Welders, the QA Inspector verified the welders' qualification in the horizontal (2G) position for thicknesses from 3 mm to unlimited.

These two welds are shown on assembly drawing No. MUSB-SA13 B/C, Page 26, approved 11-23-2006. The weld details are shown on Drawing MU-WDT-3. Both welds are partial penetration double bevel groove welds

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with no reinforcing fillet. It was observed that these welds were completed during this shift.

Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Jobes,Kenneth
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Quality Assurance Inspector

Reviewed By:	Cochran,Jim
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QA Reviewer
